

We claim:

1. A method comprising:  
at a communication unit:
  - determining a need to transmit a communication on a channel;
  - using a first receiver to monitor indicia of energy on the channel while substantially simultaneously placing a second receiver into a reduced power mode of operation, wherein the first receiver uses less power during normal operation thereof than the second receiver uses during normal operation thereof;
  - effecting an activation event as a function, at least in part, of the indicia of energy on the channel, wherein the activation event includes at least:
    - placing the second receiver into an increased power mode of operation; and
    - transmitting on the channel.
2. The method of claim 1 wherein determining a need to transmit a communication on a channel comprises determining a need to transmit a message on the channel and to then monitor the channel using the second receiver for a transmission to the communication unit.
3. The method of claim 1 wherein using a first receiver to monitor indicia of energy on the channel comprises using a first receiver that is substantially discrete from the second receiver.
4. The method of claim 3 wherein using a first receiver that is substantially discrete from the second receiver comprises using a first receiver that is substantially discrete from the second receiver while nevertheless sharing at least some components.
5. The method of claim 1 wherein using a first receiver to monitor indicia of energy on the channel comprises using a first receiver to monitor indicia of energy on the channel without also decoding messages as may be transmitted by others on the channel.
6. The method of claim 1 wherein substantially simultaneously placing a second receiver into a reduced power mode of operation comprises substantially simultaneously placing a second receiver into a powered-down mode of operation.

7. The method of claim 1 wherein using a first receiver to monitor indicia of energy on the channel while substantially simultaneously placing a second receiver into a reduced power mode of operation comprises using a first receiver that lacks a digital signal processor to monitor indicia of energy on the channel while substantially simultaneously placing a second receiver that comprises a digital signal processor into a reduced power mode of operation.

8. The method of claim 1 wherein using a first receiver to monitor indicia of energy on the channel while substantially simultaneously placing a second receiver into a reduced power mode of operation comprises using a first receiver to monitor indicia of energy on the channel while substantially simultaneously placing a second receiver into a reduced power mode of operation for at least a first predetermined amount of time.

9. The method of claim 8 wherein using a first receiver to monitor indicia of energy on the channel while substantially simultaneously placing a second receiver into a reduced power mode of operation for at least a first predetermined amount of time comprises using a first receiver to monitor indicia of energy on the channel while substantially simultaneously placing a second receiver into a reduced power mode of operation for at least a first predetermined amount of time wherein at least a portion of the first predetermined amount of time represents a dynamically selected amount of time.

10. The method of claim 9 and further comprising determining the dynamically selected amount of time as a function, at least in part, of a pseudorandom selection of a value.

11. A method of selecting a transmission time using a communication unit comprising:

- providing a first receiver in the communication unit that utilizes a first amount of energy during normal operation;
- providing a second receiver in the communication unit that utilizes a second amount of energy during normal operation, which second amount of energy is greater than the first amount of energy;
- providing a duration of time;
- operating the second receiver in a reduced power mode of operation during at least a part of the duration of time;
- using the first receiver to monitor a channel to thereby detect indicia of transmissions from other communications units during at least a part of the duration of time;
- modifying the duration of time as a function, at least in part, of any detected transmissions from other communication units to provide a modified duration of time;
- operating the second receiver in an increased power mode of operation as a function, at least in part, of the modified duration of time;
- selecting a transmission time as a function, at least in part, of the modified duration of time.

12. The method of claim 11 wherein providing a first receiver comprises providing a first receiver that monitors energy in at least a first communication channel.

13. The method of claim 12 wherein providing a first receiver that monitors energy in at least a first communication channel comprises providing a first receiver that monitors energy in at least a first communication channel but that does not decode transmissions carried by the first communication channel.

14. The method of claim 11 wherein providing a second receiver comprises providing a second receiver that decodes transmissions carried by the first communication channel.

15. The method of claim 11 wherein:

- providing a first receiver comprises providing a first receiver that monitors energy in at least a first communication channel but that does not decode transmissions carried by the first communication channel; and
- providing a second receiver comprises providing a second receiver that decodes transmissions carried by the first communication channel.

16. The method of claim 11 wherein providing a duration of time comprises providing a duration of time as a function, at least in part, of selecting a value in at least a pseudorandom manner.

17. The method of claim 11 wherein operating the second receiver in a reduced power mode of operation comprises operating the second receiver in a substantially fully powered-down mode of operation.

18. The method of claim 11 wherein modifying the duration of time as a function, at least in part, of any detected transmissions from other communication units to provide a modified duration of time comprises modifying the duration of time by extending the duration of time as a function, at least in part, of a length of time that the first receiver detects the indicia of transmissions from other communications units.

19. The method of claim 18 wherein extending the duration of time comprises stopping a count.

20. The method of claim 19 wherein stopping a count comprises stopping a count for a period of time that corresponds, at least in part, to the length of time that the first receiver detects the indicia of transmissions from other communication units.

21. A communication unit comprising:

- a first receiver that utilizes a first amount of energy during normal operation;
  - a second receiver that is at least partially discrete from the first receiver and that has at least a first mode of operation and a second mode of operation, wherein the first mode of operation utilizes a second amount of energy that is greater than the first amount of energy and the second mode of operation utilizes a third amount of energy that is less than the second amount of energy;
  - a controller that has a mode-selection output operably coupled to the second receiver;
  - a transmission scheduler having a next-scheduled transmission time output that is responsive to the first receiver and that is operably coupled to the controller;
- such that the first receiver can monitor a communication channel using a particular amount of energy while the controller causes the second receiver to operate in the second mode of operation to thereby also use no more than the particular amount of energy, and the transmission scheduler can determine a next-scheduled transmission time as a function, at least in part, of the first receiver's monitoring of the communication channel, and the controller can use the next-scheduled transmission time to determine when to switch the second receiver from the second mode of operation to the first mode of operation.

22. The communication unit of claim 21 wherein the second receiver comprises an 802.11 compatible receiver.

23. The communication unit of claim 21 wherein the second mode of operation comprises a fully powered-down mode of operation.

24. The communication unit of claim 21 wherein the second mode of operation comprises a sleep mode of operation and wherein the controller comprises controller means for selecting when to operate the second receiver in the sleep mode of operation as a function, at least in part, of at least a predetermined aggregate duration of time during which the communication channel has not carried a transmission from another communication unit.

25. A method comprising:

at a communication unit:

- determining a need to transmit a communication on a channel;
- using a receiver to monitor indicia of energy on the channel while substantially simultaneously placing the receiver into a reduced power mode of operation, wherein the receiver uses less power than during normal operation thereof;
- effecting an activation event as a function, at least in part, of the indicia of energy on the channel, wherein the activation event includes at least:
  - placing the receiver into an increased power mode of operation; and
  - transmitting on the channel.

26. The method of claim 25 wherein determining a need to transmit a communication on a channel comprises determining a need to transmit a message on the channel and to then monitor the channel using the receiver for a transmission to the communication unit.

27. The method of claim 26 wherein using a receiver to monitor indicia of energy on the channel comprises using a receiver to monitor indicia of energy on the channel without also decoding messages as may be transmitted by others on the channel.

28. The method of claim 27 wherein using a receiver to monitor indicia of energy on the channel while substantially simultaneously placing the receiver into a reduced power mode of operation comprises using a receiver to monitor indicia of energy on the channel while substantially simultaneously placing the receiver into a reduced power mode of operation for at least a first predetermined amount of time.

29. The method of claim 28 wherein using a receiver to monitor indicia of energy on the channel while substantially simultaneously placing the receiver into a reduced power mode of operation for at least a first predetermined amount of time comprises using a receiver to monitor indicia of energy on the channel while substantially simultaneously placing the receiver into a reduced power mode of operation for at least a first predetermined amount of time wherein at least a portion of the first predetermined amount of time represents a dynamically selected amount of time.

30. The method of claim 29 and further comprising determining the dynamically selected amount of time as a function, at least in part, of a pseudorandom selection of a value.